REMARKS

The claims have been amended to remove descriptions identified with a reference numeral (in parenthesis). Claims 1, 2, 4 and 14 have been amended to correct spelling. Claims 1 and 14 have further been amended as shown and the support of which is found in the specification, not limited to paragraphs [0022], [0023] and [0025]. No new subject matter has been added.

ARGUMENTS

Claims 1 – 22 are rejected by Examiner under 35 U.S.C 103(a) over Weiss et al. WO 02/057746 in view of Lubatschowski et al. DE 100 20 559 [equivalent to US 6,787,733] in view of Ganser US 2002/0164678. The Examiner notes that WO 02/057746 does not teach or suggest a pulsed laser beam application but asserts that it would have been obvious to use an ultrashort, pulsed laser to avoid the effects of heat from a continuous laser. (Page 3 of Office Action). The rejection is herein traversed.

The Cited References

Weiss WO 02/057746 discloses a microdissection slide that uses a laser (preferably UV) projected transverse onto a displaceable X-Y table. The novel slide is disclosed as useful to cut a sample from a preparation placed on the slide and prevent the severed sample from remaining stuck to the carrier slide. Weiss teaches the use of slides having a box structure in which the outer perimeter has a relatively thick, first thickness with a relatively thin, central film having a second thickness. The sample is adhered to the surface of this inner portion. After selecting a desired sample, the laser cuts through the sample and supporting film thereby freeing the sample to drop into a catch bin located beneath the sample. Focus in the Z axis is performed manually with real time monitoring performed by video camera associated with a display (Fig. 7). A machine-translated copy of Weiss is attached hereto.

Lubatschowski et al. US 6,787,733 [DE 100 20 559] discloses a device for "machining", i.e., cutting metallic materials, ablation and structuring of biological tissues, and for changing refractive index in glass (col. 2 at lines 32-37). As disclosed in col. 2 at lines 39-48, the use of a focused, pulse laser provides "extremely precise cutting" with ablation rates on the order of sub-micron rates possible.

As noted by Lubatschowski, a problem with pulsed lasers has been the inability to monitor the cutting/machining operation in real time. See, col. 2 at lines 60+.

Lubatschowski et al. uses a pulsed laser for a specific reason: the non-amplified pulses are used to test the material as it is machined. See, col. 3 at line 61 to col. 4 at line 28.

Ganser et al. US 2002/0164678 is a microscope device for transverse cutting samples from a sample with a laser. The of Ganser et al. was to improve cutting quality and discloses a machine and method for laser cutting microscopic samples which includes having a fixed microscope, an optical axis, a laser and an objective aperture. (Ganser et al. abstract and [0002].)

The laser cutting described by Ganser et al. requires use of a diaphragm to produce a dimmed laser beam. Ganser et al. discloses that as a result of the reduction in the laser aperture, the cone of laser light becomes slimmer, which leads to an increase in the depth of focus. (Ganser et al. [0007], [0013] and [0016].) The optical system disclosed in Ganser et al. further requires a dichromatic splitter, which duly reflects the laser light and injects into the objective. (Ganser et al. [0017].)

None of the references teaches a microtome

None of the devices in the cited references teaches or discloses a microtome that will sever a slice (flat or curved) from a specimen. Microtomes and the art of microtomy are understood terms within the art. See, col. 2 in the present specification.

Weiss et al. and Ganser et al. are both transverse cutting devices that can remove a smaller section from a sample that has been previously processed with a microtome to fit onto the carrier slide. Lubatschowski et al. is a machining device that is useful for cutting metals or "ablation and structuring" of biologic materials (col. 2, lines 35-36). Lubatschowski et al. is not a microtome and is not disclosed as useful for microtomy.

A microtome is required by the present claims. Independent claim 1 requires "microtomy of said processed object by severing a slice of at least a partial area from a parting surface." Independent claim 14 specifies that "the beam focus [is moved] relative to the support . . . in two or three directions of space so that the processed object is microtomed."

Reconsideration and allowance are courteously solicited.

Respectfully submitted,

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